

and moderate hyperemia were evident. Tumor masses were indefinitely outlined but identical in structure with the thyroid. Several hemorrhagic areas were included and at the margins of the nodules collections of round cells were seen. Prostate: Many acini contained corpora amylacea. Some hyperplasia of the connective tissue noted. No tumor metastasis. Testicle: Moderate degree of fibrosis present. Peritoneal, retroperitoneal, mesenteric, omental and retrovesical nodules showed tumors identical in type with that of thyroid. The same may be said of the intramuscular growths in the anterior abdominal wall. Deep cervical lymph nodes showed lymphoid hyperplasia but no metastasis.

Pathologic Diagnosis: Endotheliomata of the thyroid, cerebrum, heart, lungs, liver, gall bladder, pancreas, kidneys, peritoneum and anterior abdominal wall; chronic interstitial pneumonitis; splenitis; pancreatitis; enteritis and appendicitis; acute parenchymatous nephritis; chronic prostatitis and orchitis; lymphoid hyperplasia of deep cervical lymph nodes.

Remarks: The following points in this case are of interest: the multiple peripheral foci, the extensive internal metastasis, the almost complete involvement of the thyroid without evidences of hypo- or hyperthyroidism, and the widespread destruction of the right parietal lobe with the first appearance of cerebral symptoms only two weeks before death. All the tumors had uniformly the same structure, except that there were numerous stellate cells in the cerebral masses and an absence of the same elsewhere. With the vascular channels, the forms and arrangement of the cells, endothelioma was suggested; however, there seemed a possibility that the cerebral condition might be gliosarcomatous. Mallory's and Van Gieson's stains excluded the latter. It is likely that the primary focus was situated in the thyroid on account of the almost complete involvement and widespread necrosis of the same with the presence of a single mass and that the brain was secondarily invaded as indicated by the multiple masses.

A FEW REMARKS ON THE MANAGEMENT OF TYPHOID.*

By G. R. CARSON, M. D., San Francisco.

About fifty or sixty typhoid patients of all types enter the Southern Pacific Hospital every year; walking typhoid, para-typhoid and severe hemorrhagic types. Some of these cases arrive in the first week, others in the second and third weeks. Some are transported from quite a distance; so we have a fairly good opportunity for observing and studying this disease. I have observed some five hundred cases during the past few years, from the days of the strictly milk diet and ice cold baths to the days of forced feeding and the tepid sponge. Naturally some of these observations have left rather marked impressions on me.

It is not necessary to give a typhoid drugs just because he has the disease; the less drugs the better the case will do. There is far too much unscientific prescribing. It is a mistake, and one that is very prevalent to believe that therapeutics means treatment only. Therapeutics covers the whole field of management of the disease. It is a mistake for a physician to declare he has cured typhoid; what he does do is to manage the disease and the patient who has it. The details of this manage-

ment, diet, physical treatment, and lastly medical necessities, comprise the therapy of the fever. In other words, more therapeutics and less medicines in typhoid.

Why should we not feed our typhoids when Nature calls out so for assistance? Are we to remain blind to this call? If he is hungry, feed him—a moist tongue and an appetite is a good guide. The mortality is lessened by feeding. Years ago at the Southern Pacific Hospital our mortality was about 12 per cent.; it is now about 2 to 3 per cent., and some years no per cent.

It is a mistake to begin with a milk diet and later during the height of the fever commence feeding your case. Start with a good varied diet from the onset. A liberal diet of high caloric value is indicated to keep up the body weight. Dr. Warren Coleman of Cornell, whose recent articles have appeared in the medical journals, has done much work along this line. In fact one of his recent associates informed me that he gave a prize to the typhoid who ate the most. The well-fed typhoid goes through the disease happier and more contented. Tympanites and other complications are lessened and we really have not any sequela with which to deal. The convalescent stage is virtually eradicated. It is doubtful if it ever will be determined that any one diet is the only correct one for typhoid fever—the patient has his dietary habits and his ability to digest certain foods during typhoid fever must be individualized. Therefore a diet correct for one patient may be absolutely incorrect for another.

Also such complications as diarrhea, hemorrhage and vomiting must be considered. It is often necessary to stop all feeding for a time. The diet now in use at the Southern Pacific Hospital is varied and mixed and consists largely of eggs, milk, oatmeal gruel, tea, coffee, cocoa, rice, wine and orange jelly, various soups, crackers with milk, soft puddings, ice cream, soft toast, apple sauce, butter-milk, finely minced lean meat, soft part of raw oysters and many other articles of food. Salt and sugar are used enough to flavor. The food is given in small quantities every two hours during the day and every four hours during the night if patient is awake, but must not be disturbed, as sleep is very essential. The object in mind being to administer enough of all, to keep the physiological process as near normal as possible while the patient is going through the disease. It is well to give an abundance of water to drink.

As to baths, the tepid friction bath is more agreeably borne by the patient and good reaction is usually secured; the ice cold bath has about been discarded. Cleansing baths are given daily. Occasional use of the ice-coil to head and abdomen keeps the patient quiet and comfortable and tends to keep down the fire. When a patient reacts well from a bath it is the proper one for him. By reaction is meant, the effect on the circulatory, respiratory and nervous system.

Salt solution enemas are given as a routine, three times in twenty-four hours if the temperature remains high. It lessens the toxemia, increases the

* Read before the Tenth Annual Meeting of the Pacific Association of Railway Surgeons.

flow of urine and diminishes the liability to tympanites. Low enemas are given every other day for constipation and no purgatives by the mouth. Hemorrhage cases are treated in the usual way—all feeding is stopped for a while. Horse serum, morphia, subcutaneous salt solutions, calcium lactate, turpentine, etc., may be used. If tympanites can be lessened the hemorrhage usually ceases.

For cardiac failure the hot mustard pack is often used to dilate the peripheral circulation and bring the skin heart to the assistance of the organic heart. Also the use of strychnia in large doses, digitalis and camphorated oil are to be recommended. Immediate operation saves some cases of perforation. A few cases have had autogenous vaccines, but they did not seem to change the course of the disease. Schafer serum or vaccine was used on a few cases as a last resort; these cases recovered, but just how the vaccine acted was not known. A few cases were kept on an exclusive buttermilk diet, but the fever was little influenced. Have not used the typhoid prophylactic vaccine, but should a case be diagnosed during the first few days of onset it might be of service in aborting the case. Some observers have noticed this in a few instances.

Hiss leukocyte extract has been used to produce a leukocytosis in this leukopenia disease—it does produce a leukocytosis but does not help the patient.

None of our typhoid patients are discharged from the hospital as cured until a final examination is made of the urine and stools and found free from the typhoid germ, as a typhoid carrier in a railroad camp is a dangerous thing.

Discussion.

Dr. T. W. Huntington: For many years I have maintained an acute interest in this department of medicine. Regarding the treatment of typhoid fever, I, very early, satisfied myself that one measure, above all others, is essential as a therapeutic agent, and I have seen no reason for changing my opinion since I abandoned this line of work. I refer to the ice coil used intelligently and persistently throughout the acute stage of the disease. I think I may say, without fear of challenge, that I was the first person to devise and use the ice coil. Long before Leiter made his announcement, I had used the ice coil in typhoid fever. The results which attended my efforts when I was enabled to employ the coil, early in the course of the disease, were to me remarkable. Its employment means a uniformly low temperature from the beginning to the end of the disease; that is, the range of temperature may be maintained at from 99° to 103°, with an average high temperature of 101°, save in a few rare cases. Under its use, the patient sleeps quietly at night, takes and assimilates a reasonable amount of nourishment, maintains his weight with slight loss. His mental condition is slightly, if at all, below normal. There is an absence of delirium, nervous irritation, diarrhea, tympany and bowel hemorrhage. Bowel perforation is of exceedingly rare occurrence, if encountered at all. A thing which impressed me very deeply was that, when the coil treatment has been intelligently carried out for three or four days, the patient and the patient's friends always sharply resent any interruption of its use. In a few cases, where the ice coil fails to control the temperature, it may be supplemented by a judicious use of phenacetin. This is insisted upon by so able an authority as Dr. W. A. Briggs of Sacramento, who maintains that the use of phenace-

tin in typhoid fever is not only safe but rational, and in a few cases essential. Another method of control of temperature is ice water irrigation of the rectum. This may be used through a double current catheter and the flow be made, thereby, continuous. Under its use the temperature should be carefully noted, as frequently it drops rapidly under this method of procedure.

Dr. Cummins: In regard to the vaccine treatment. Vaccines, as you know, may be used for prophylactic or therapeutic purposes. We have not used it prophylactically at the hospital, but we have used the autogenous vaccines on two cases for therapeutic purposes. These cases were mild and they made a very rapid recovery. It is said that particularly severe cases are not suitable for the administration of vaccine. A German method is to immunize rabbits against typhoid. Their spleens are then removed, macerated in sterile salt solution and given to the patient by mouth. It seems a rational procedure, but very little work has been done in this country on that treatment of typhoid.

Dr. Carson, closing: We have recently had an epidemic of typhoid fever among train employees on the same run; engineers, firemen and brakemen came to the hospital who had run on trains between certain points. A thorough investigation was made by Dr. Cummins and prophylactic measures adopted. Since then no new cases have occurred in that district. The tender on the engine is filled with water from various tanks along the line, hence firemen and enginemen, who drink from the tender are more liable to contract typhoid; furthermore, firemen and engineers drink eight or ten times more than those in other occupations. I hardly agree with Dr. Huntington regarding the ice coil. It is very agreeable to the patient and tends to keep down the fever. Colon irrigation with salt solution is very beneficial; it increases the flow of urine, tends to diminish the liability of tympanites and causes a favorable reaction; also makes up for the deficiency in salt in the feeding. I am rather opposed to the use of phenacetin and other coal tar products in the treatment of typhoid. I like to know how my patient is doing. Phenacetin depresses the heart's action and tends to hide the true condition of the patient. Much harm I believe has been done in the past by improperly giving ice cold baths; this drives the blood into the deeper organs and congests them. Regarding feeding of typhoid, I am fully convinced that a liberal diet should be adopted from the beginning of the disease.

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